Advancing Wound Bed Preparation Using Mechanical And Excisional Debridement With a Hooked Nylon Fabric Device

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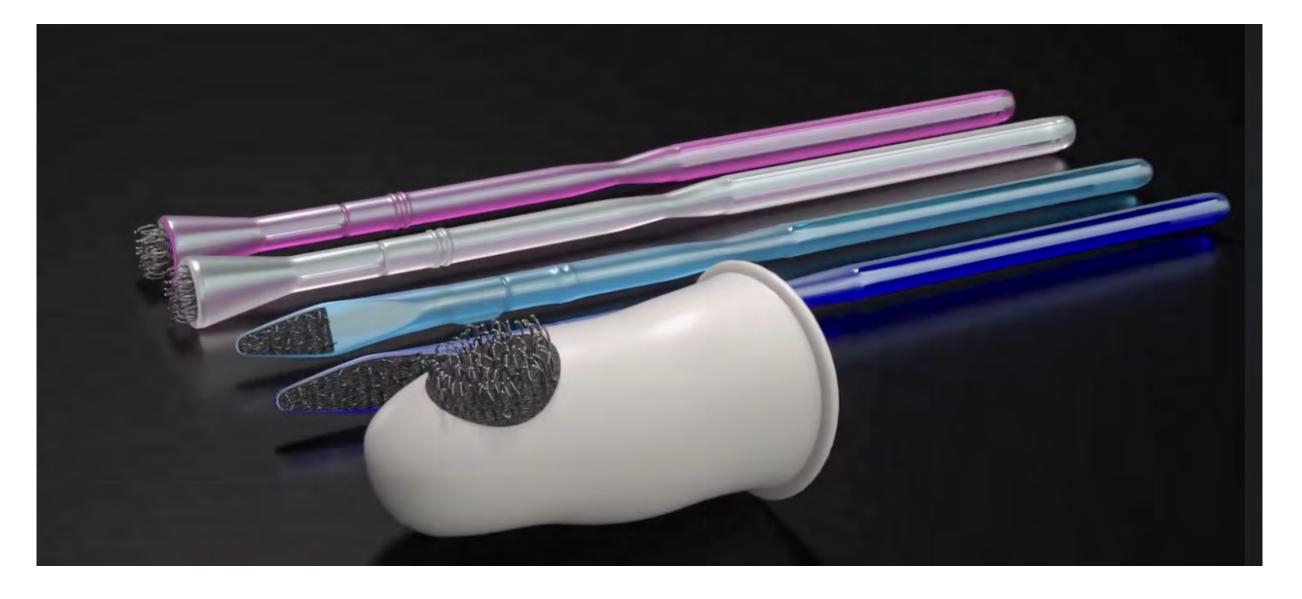
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Introduction:

The aim is to report on the utility of a new technology to remove non-vital tissue from wounds. This is a two case series; Case 1. Heel Ulcer: 50 year old mixed race female with longstanding diabetes, chronic kidney failure on dialysis, severe and marked PAD, and cancer on chemotherapy. She sustained a bulla traumatically while receives weekly dressing changes with wound care and/or repeated debridements, microvascular endarterectomies, intermittent IV antibiotics, and continued dialysis. Case 2: Bilateral Toe Wounds: 48 year old Hispanic male diabetic and insensate regarding toes and work boot related digital maceration, tinea pedis with blisters and distal Diabetic toe ulcerations. He was treated with weekly serial debridements, PO antibiotics, foam topical dressings and accommodation pads.

Methods:

Topical 2% lidocaine spray was applied to the wound 10 minutes before wound debridement in sensate patients with the fabric-based brush-curettage handle devices (SoftBiopsy®+D, Histologics LLC, Anaheim, CA) using pressurized stroking for surface slough removal and rotation of the fabric (Kylon®, Histologics LLC, Anaheim, CA), depressing the hooks that covert to micro-curettes and achieve friction sufficient to remove and trap semi-solid necrotic tissue. Pain was reported if present. Mechanical and surgical debridement to the level of the deep dermis and superficial subcutaneous level.





Results:

Selective debridement into deep dermis removing necrotic debris, hyperkeratosis, and slough, with micro-punctate bleeding was the goal and achieved with no discomfort in neuropathic cases and otherwise mild discomfort after topical anesthesia. A second subsequent debridement a few weeks later was less painful. A biopsy device was performed after debridement. After the second debridement, the wound has improved and reduced in size. The toe wounds on the right foot healed in 68 days while the left foot healed in 62 days.

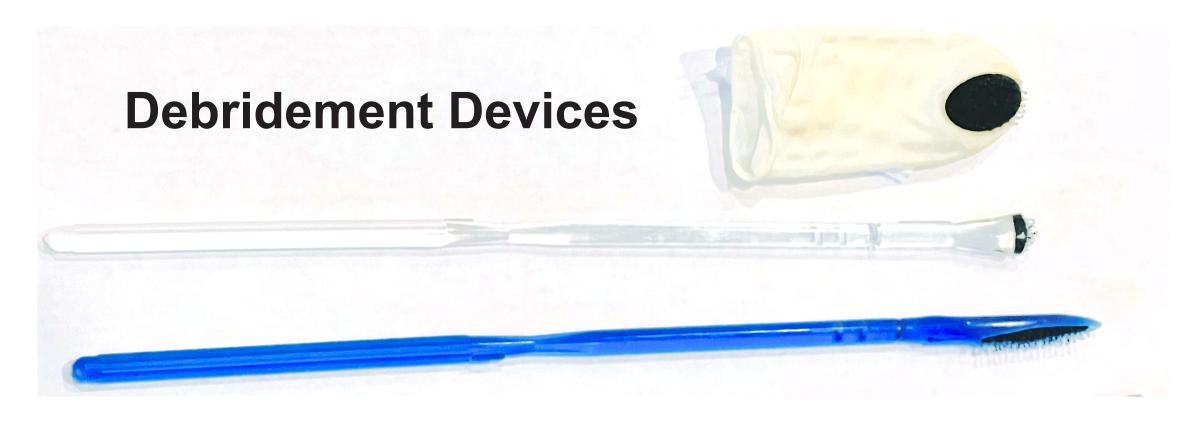


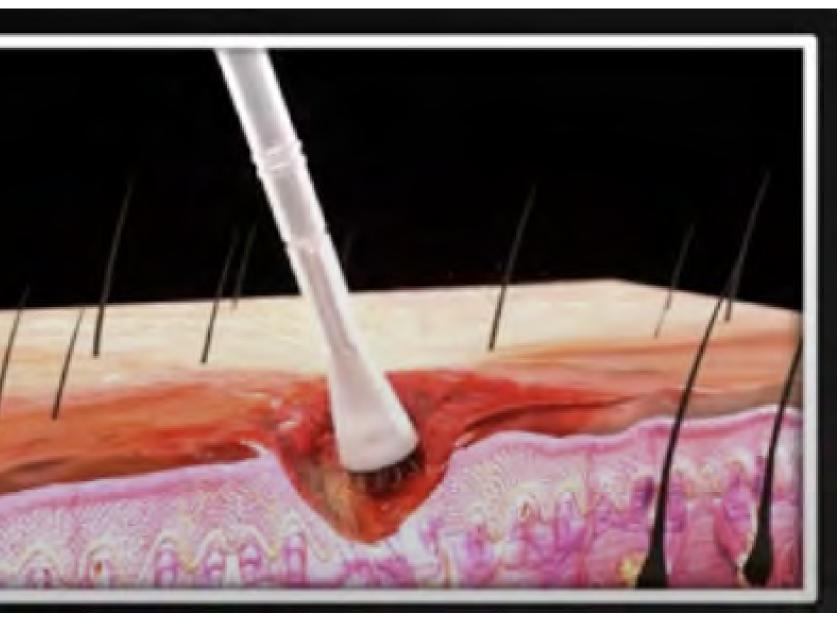


Heel Ulcer Case with smaller revitalized wound bed at second and third debridement episodes over 4 weeks

Discussion:

The novel use of a unique hooked nylon brush-curette fabric-based technology allowed for regular systematic debridement with multiple episodes during the interval before insurance approval for a cell and tissue product (CTP). This resulted in the heel case and obviated the need for grafts in the toe wound case entirely. The use of this specialized fabric has shown immune stimulatory effects in published studies (Sitelman) and obvious micropunctate vascular effects on the bed.





Debridement of the Wound Base with Hooked Frictional Fabric Applicator with sweep or pressurized twisting

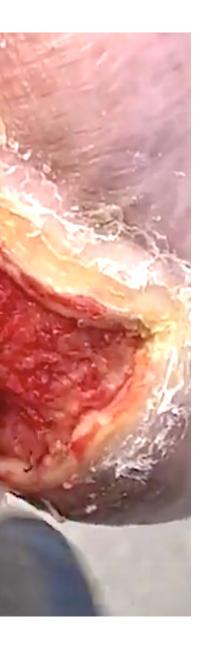


Excavated Necrotic Debris from the Wound Base with Hooked Frictional Fabric Applicator



Toe wounds healed within 2-3 weeks after first debridement episode

Hooked Medical Fabric Applicator Device For Flat Wound Debridement (Non-Crevice)







Debrided Wound Base with apparent decrease in sq.cm. size at second debridement episode, press and rotate method

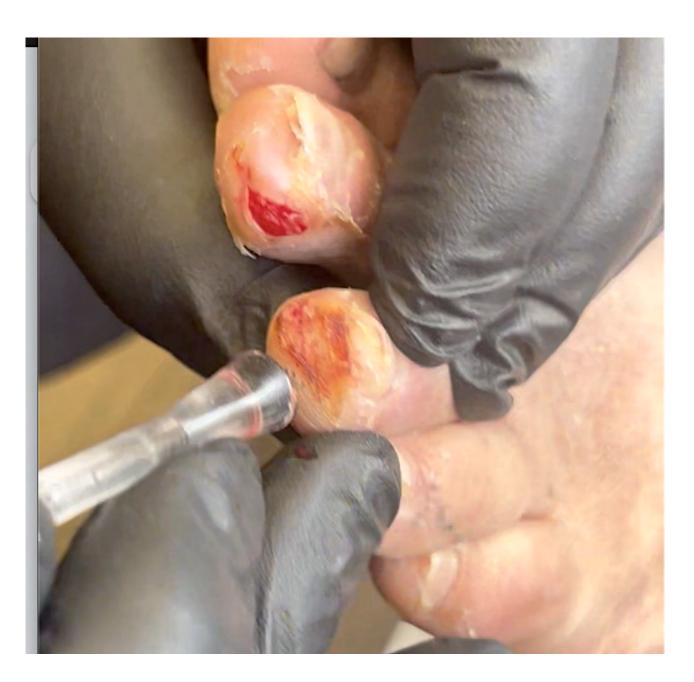
Toe Wounds - Debridement

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- October 29-31, 2021.
- 2022, Phoenix, AZ.







Debridement of Toe Wounds

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